



FIRE RESISTIVE CONSTRUCTION REQUIREMENTS

SAN LUIS OBISPO COUNTY DEPARTMENT OF PLANNING AND BUILDING

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Promoting the Wise Use of Land • Helping to Build Great Communities

2007 California Building Code Chapter 7A Wildland-Urban Interface (WUI)

All **new** buildings located in any Fire Hazard Severity Zone within State Responsibility Areas (SRA) must meet fire safety construction requirements. This includes commercial buildings, dwellings, carports, garages, workshops, mobile homes, and barns. **Additions** are not required to meet these requirements unless there is a complete remodel of the existing structure including windows, siding, roofing and exterior doors. (Contact Cal Fire at (805) 543-4244 to find out the Fire Hazard Zone for the property.)

Detail and key to plans or specify on plans the following requirements:

ROOFING

1. **Roof coverings:** Where the roof profile allows a space between the roof covering and roof decking, the spaces shall be constructed to prevent the intrusion of flames and embers, be fire stopped with approved materials or have one layer of No. 72 ASTM cap sheet installed over the combustible decking.
2. **Roof Valleys:** When provided, exposed valley flashings shall be not less than 26 ga galvanized sheet metal installed over a minimum 36" wide underlayment consisting of one layer of No. 72 ASTM cap sheet running the full length of the valley.
3. **Roof Gutters:** Shall be provided with the means to prevent the accumulation of leaves and debris in the gutter.

ATTIC VENTILATION

1. **Eave or cornice vents:** Vents shall not be installed in eaves and cornices unless designed to prevent the intrusion of flame & burning embers into the attic area of the structure.
2. **Eave protection:** Eaves and soffits shall be boxed in, or open, and be protected by ignition-resistant materials or noncombustible construction on the exposed underside. Open eave rafter tails may be of fire retardant treated materials or of heavy timber construction (4x6 min).

EXTERIOR WALLS

1. **Exterior walls:** Shall be: ignition-resistant material, heavy timber or log wall construction or shall provide protection from the intrusion of flames and embers in accordance with Standard SFM 12-7A-1.
2. **Exterior wall coverings:** Shall extend from the top of the foundation to the roof and terminate at 2" nominal solid wood blocking between rafters at all roof overhangs OR in the case of enclosed eaves, terminate at the enclosure.
3. **Exterior wall vents:** Vents opening into the attic or subfloor in exterior walls shall be designed to resist the intrusion of flame and embers, or the vents shall be screened with corrosion-resistant, noncombustible wire mesh. The size of openings in the mesh shall be a minimum of 1/16th inch and shall not exceed 1/8th inch.
4. **Exterior glazing and window walls:** Exterior windows, window walls, glazed doors, and glazed openings within exterior doors shall be insulating-glass units with a minimum of one tempered pane, or glass block units, or have a fire-resistive rating of not less than 20 minutes. Note on floor plan and in window schedule.
5. **Exterior door assemblies:** Shall conform to SFM standard 12-7A-1 OR shall be of approved noncombustible construction, OR solid core wood having stiles and rails not less than 1-3/8" thick, OR shall a fire resistive rating of not less than 20 minutes.
Exception: Noncombustible or exterior fire-retardant treated wood garage doors are not required to comply with this chapter.

DECKING SURFACES AND UNDER FLOOR PROTECTION

1. Decking

Decking surfaces, stair treads, risers and landings of decks, porches, and balconies where any portion of such surface is within 10' of the primary structure shall comply with one of the following:

- a. Shall be constructed of ignition-resistant materials OR constructed with heavy timber, exterior fire-retardant-treated wood, approved noncombustible materials, OR of 2" nominal redwood construction grade common or better.
- b. The county will accept decks with non-combustible surfaces such as ceramic tile or other product listed as "one-hour" or Class A roof covering. The use of paints, coatings, stains, or other surface treatments are not an approved method of protection.

2. Floor Projections, under floor areas and decks

The underside of floor projections, unenclosed under floor areas or decks attached to, or within 10 feet of a structure, shall be constructed of, or covered with, ignition resistant materials, be of fire retardant or heavy timber construction or shall be enclosed to grade. Minimum Heavy Timber sizes are 6x6 columns, 6x8 beams, 4x8 joists.

ANCILLARY BUILDINGS

Ancillary buildings and structures, and detached accessory structures, shall meet all fire-resistive construction requirements as listed above. Tool and storage sheds, playhouses, and similar structures, which are normally exempt from permits must be a minimum of 10 feet from the permitted structure or will have to meet all of the above requirements.

Fences attached to or within 5 feet of the permitted structure shall be constructed of non-combustible material, fire-retardant treated wood or meet the same standards as exterior walls.

DEFENSIBLE SPACE

Prior to building permit final approval, the property shall be in compliance with Cal Fire vegetation clearance requirements. Read about these requirements at:

http://www.fire.ca.gov/communications/communications_firesafety_100feet.php

PRODUCTS

You can find information on fire resistive products presented by the California Department Of Forestry and Fire Protection Office of the State Fire Marshal here:

<http://www.osfm.fire.ca.gov/strucfireengineer/pdf/bml/wuipproducts.pdf>

FREQUENTLY ASKED QUESTIONS

May I use quarter-inch mesh on vents? As a general rule, no. Attic and under floor ventilation must use special flame and ember-resistant vents.

May I have eave vents in Fire Hazard Severity Zones? Yes - if the vents are tested to resist the intrusion of flame and burning embers into the attic.

IGNITION RESISTANT EAVE CONSTRUCTION

For new buildings located in any Wildland Urban Interface Fire Hazard Zone within State Responsibility Areas, **eave vents** are not allowed unless they are designed to resist the intrusion of flame and burning embers into the attic area of the structure.

Examples can of these products can be found at:

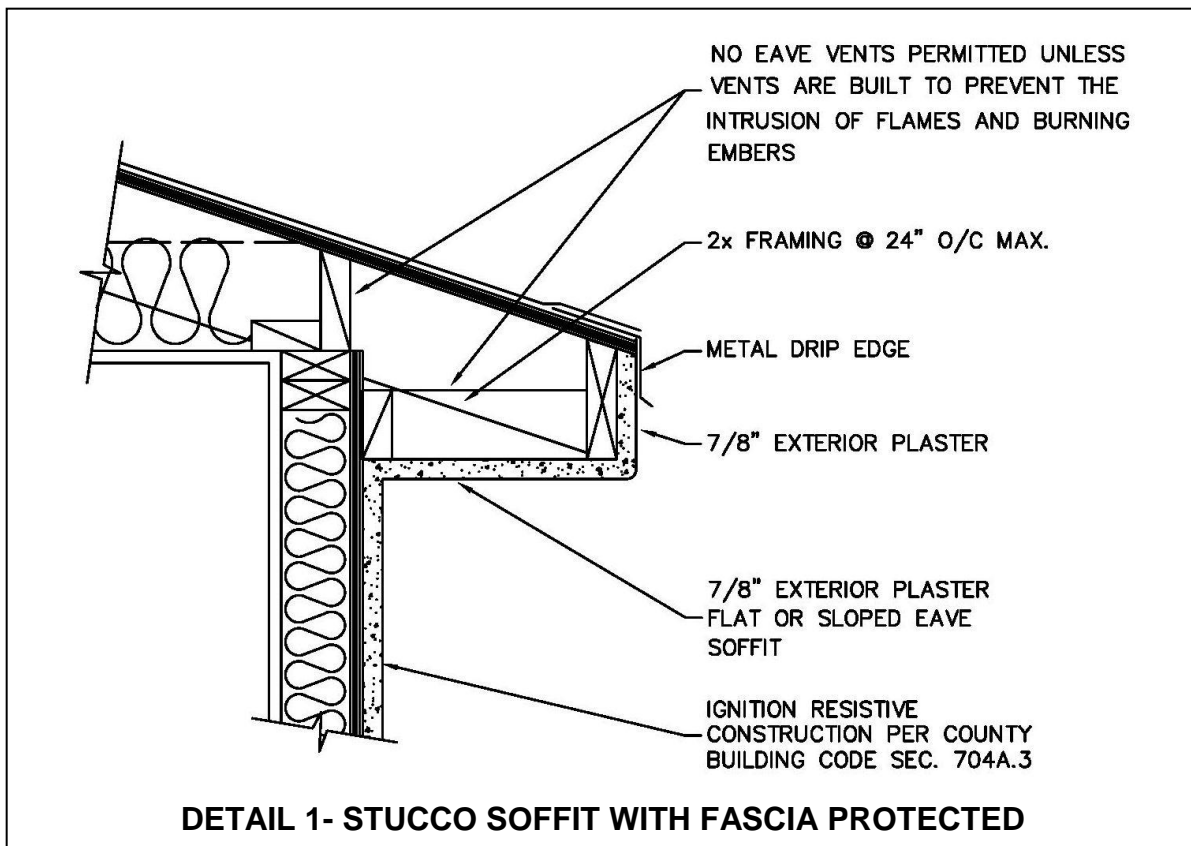
Brandguard Vents (www.brandguardvents.com)

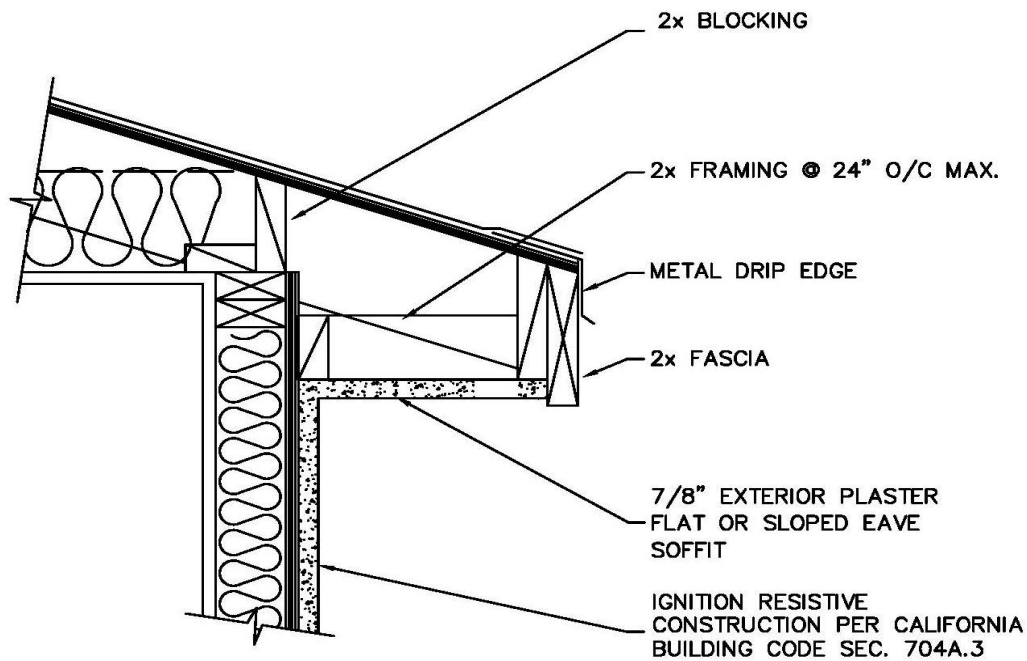
O'Hagin's Vents (www.ohaginvent.com)

Vulcan Vents (www.vulcantechnologies.com).

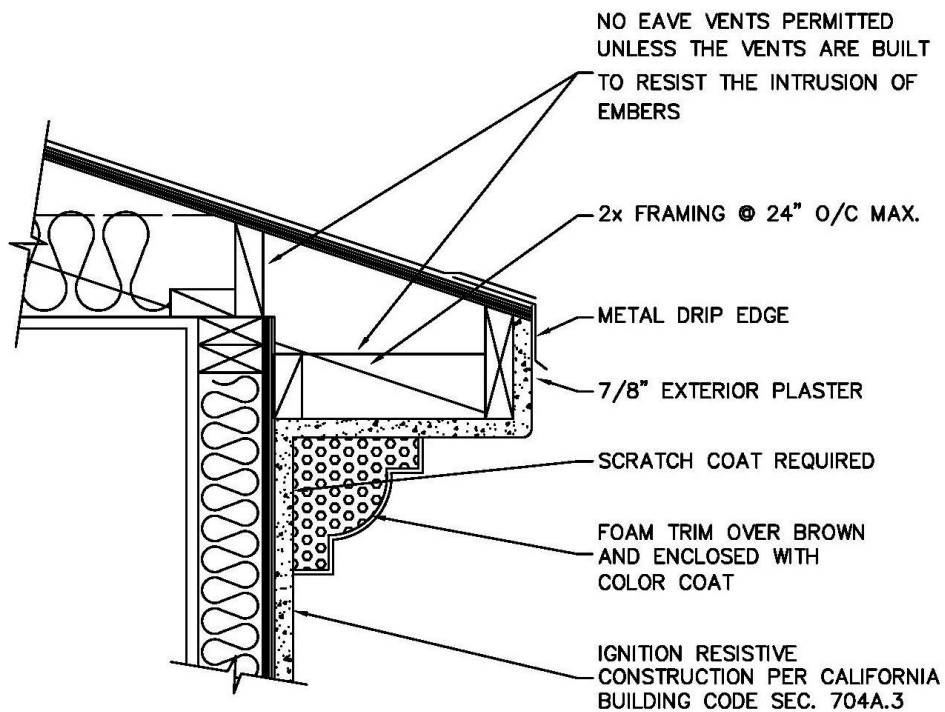
Other vents may be used with County and CalFire approval.

Below are examples of ignition resistant eave construction:

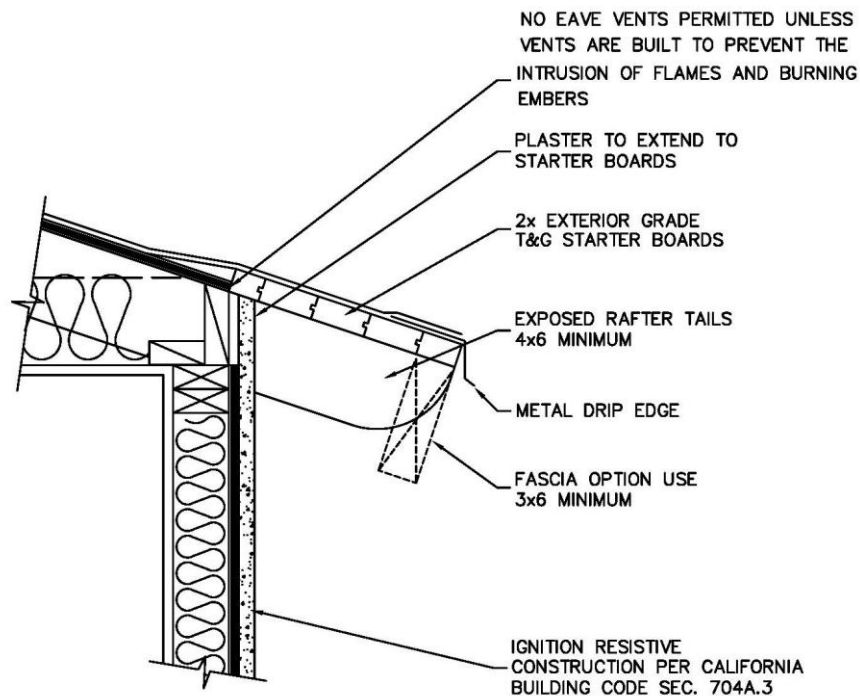




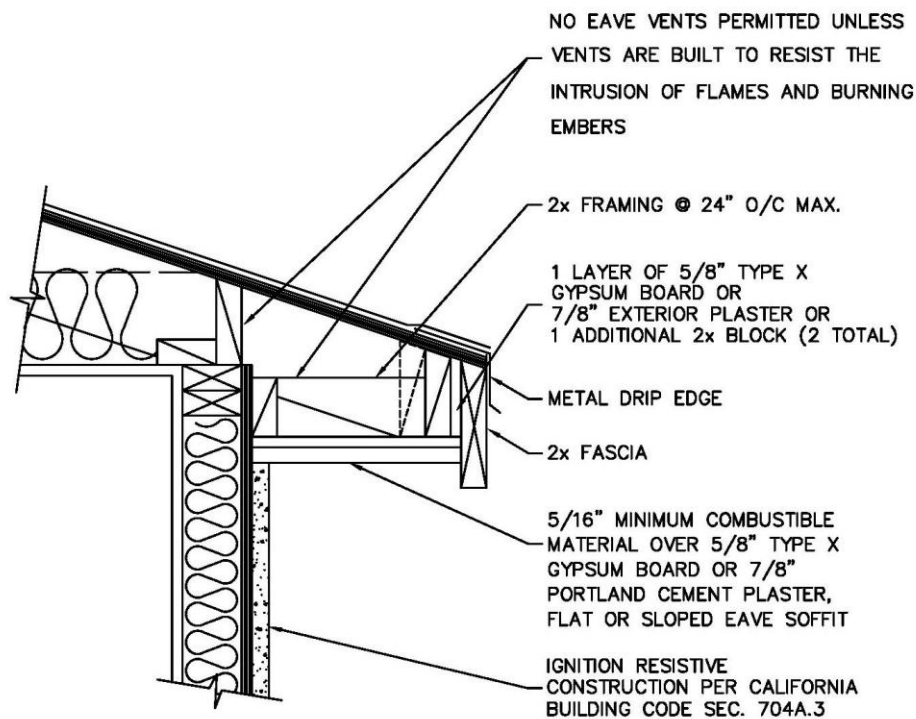
DETAIL 2- STUCCO SOFFIT WITH FASCIA EXPOSED



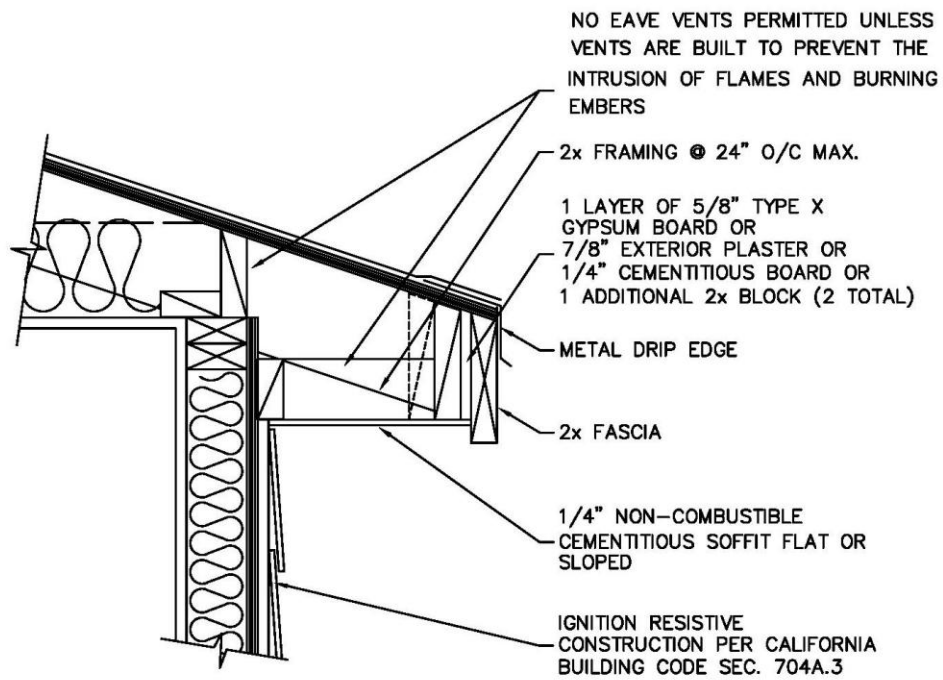
DETAIL 3- FOAM TRIM WITH STUCCO



DETAIL 4- HEAVY TIMBER

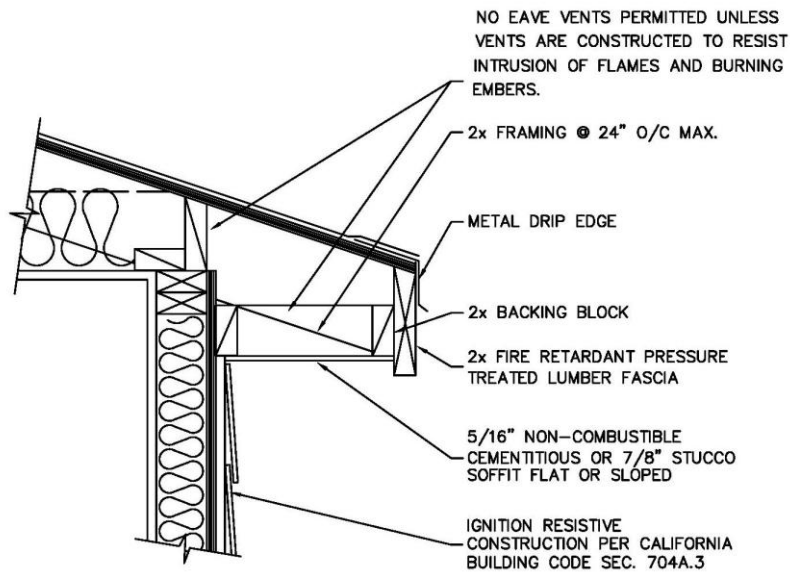


DETAIL 5- WOOD SOFFIT FASCIA EXPOSED WITH FIRE RESISTIVE UNDERLAYMENT



NOTE: ALL JOINTS MUST BE TIGHT FITTING AND CAULKED

DETAIL 6- CEMENTITIOUS SIDING ON SOFFIT



FIRE RETARDANT LUMBER:
USE EITHER EXTERIOR FIRE-X RETARDANT TREATED LUMBER, NER-457, OR FRX FIRE RETARDANT TREATED WOOD, ESR-1159 TREATED WOOD, ESR-1159.

ALL FIRE RETARDANT TREATED LUMBER SHALL NOT TO BE LEFT UNFINISHED.

NOTE: ALL JOINTS MUST BE TIGHT FITTING AND CAULKED

DETAIL 7- EXPOSED FIRE RETARDANT TREATED WOOD FASCIA